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## Tuberculosis Disease

### **Overview**

For a more complete description of Tuberculosis disease refer to the following texts:

- Control of Communicable Disease Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.
- Core Curriculum on Tuberculosis What the Clinician Should Know, Fourth Edition 2000
- American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: Treatment of Tuberculosis

### **Case Definition**

#### ***Clinical Description***

A chronic bacterial infection caused by *Mycobacterium tuberculosis*, characterized pathologically by the formation of granulomas. The most common site of infection is the lung, but other organs may be involved.


#### ***Clinical case definition***

A case that meets the following criteria:

- A positive tuberculin skin test
- Other signs and symptoms compatible with tuberculosis (e.g., an abnormal, unstable [i.e., worsening or improving] chest radiographs, or clinical evidence of current disease)
- Treatment with two or more anti-tuberculosis medications
- Completed diagnostic evaluation

#### ***Laboratory criteria for diagnosis***

- Isolation of *M. tuberculosis* from a clinical specimen\* or
- Demonstration of *M. tuberculosis* from a clinical specimen by nucleic acid amplification test, or
- Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained

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### *Case classification*

<u>CLASS</u>	<u>TYPE</u>	<u>DESCRIPTION</u>
0	No TB exposure Not infected	No history of exposure Negative reaction to tuberculin skin test
1	TB exposure No evidence of Infection	History of exposure Negative reaction to tuberculin skin test
2	TB infection No disease	Positive reaction to tuberculin skin test Negative bacteriologic studies (if done) No clinical, bacteriological, or Radiographic evidence of active TB
3	TB, clinically active	<i>M. tuberculosis</i> cultured (if done) Clinical, bacteriological, or Radiographic evidence of TB
4	TB	History of episode(s) of TB <b>or</b> Abnormal but stable radiographic findings Positive reaction to tuberculin skin test Negative bacteriologic studies (if done) <b>and</b> No clinical radiographic evidence of Current disease
5	TB suspected	Diagnosis pending


### **Comments:**

CDC counts clinical cases of tuberculosis as a case if the criteria are met.

***Tuberculosis Disease is currently not reportable to CDC through MOHSIS.***

### **Case/Contact Follow Up and Control Measures**

- A person suspected of having tuberculosis of the throat or lungs should be isolated either in their home or in the hospital until they have met the following criteria: 2 weeks of treatment, 3 negative smears, and are clinically improving.

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- All close contacts should receive a tuberculin PPD skin test as soon as possible and if the skin test is 0mm the test should be repeated again in three months. For more in-depth information on contact follow up and control measures refer to the Core Curriculum on Tuberculosis, and the Tuberculosis Control Manual, section 4.0

### **Laboratory Procedures**

- See section 3.0 in the Tuberculosis Control Manual

#### **SMEARS:**

None seen	Negative
10-30 per slide	1+; Rare
31-100 per slide	2+; Few
1-9/field	3+; Many
>9/field	4+[ml]; numerous


#### **CULTURES:**

<u>Result</u>	<u>Interpretation</u>
Smear -, culture -	None to few bacilli present, nonviable
Smear -, culture +	Few bacilli present, but viable
Smear +, culture -	Bacilli present, but non-viable or not recovered
Smear +, culture +	Confirmed recovery of Mycobacteria, identification required

### **Reporting Requirements**

Tuberculosis disease is a Category I disease and shall be reported to the local health authority or to the Missouri Department of Health and Senior Services (DHSS) within 24 hours of first knowledge or suspicion.

1. For suspected or confirmed cases of tuberculosis disease complete a "Disease Case Report" (CD-1).
2. Contact investigation information should be submitted to the person your county reports to at the state/region as soon as the initial investigation is completed and when the three-month investigation is completed on a Tuberculosis Worksheet for Contacts of Newly Diagnosed Cases of TB (TBC-13).
3. Tuberculosis History (TBC-10) should be submitted for all laboratory confirmed or clinical cases of tuberculosis.
4. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax, or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
5. Within 90 days of the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator.

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## **References**

1. American Academy of Pediatrics. "Tuberculosis." In: Pickering LK, ed. 2000 Red Book: Report of the committee on Infectious Diseases. 25<sup>th</sup> ed. Elk Grove village, IL. 2000:593-613.
2. Chin, James, ed "Tuberculosis." Control of Communicable Disease Manual. 17<sup>th</sup> ed. Washington, DC: American Public Health Association, 2000: 521-532.
3. Centers for Disease Control and Prevention. Core Curriculum on Tuberculosis, What the Clinician Should Know. 4<sup>th</sup> ed., 2000.
4. American Thoracic Society Documents. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: Treatment of Tuberculosis, October 2002.
5. Missouri Department of Health and Senior Services. Tuberculosis Case Management Manual. Revised annually.

## **Web Sites:**

1. Centers for Disease Control and Prevention, Division of Tuberculosis Elimination [www.cdc.gov/nchstp/tb/](http://www.cdc.gov/nchstp/tb/) (June 2003).
2. American Thoracic Society/Centers for Disease Control and Prevention/Infectious Diseases Society of America: Treatment of Tuberculosis <http://www.thoracic.org/adobe/statements/treattb.pdf> (June 2003).
3. Missouri Department of Health and Senior Services' Tuberculosis Control Manual <http://www.dhss.state.mo.us/TBManual/index.pdf> (June 2003).
4. Francis J. Curry National Tuberculosis Center <http://www.nationaltbcenter.edu/> (June 2003).
5. Charles P. Felton National Tuberculosis Center at Harlem Hospital <http://www.harlemtbcenter.org/> (June 2003).
6. New Jersey Medical School National Tuberculosis Center <http://www.umdnj.edu/ntbcweb/tbsplash.html> (June 2003).

# **Tuberculosis**

## **FACT SHEET**

### **What is Tuberculosis?**

Tuberculosis (TB) is a serious disease caused by mycobacteria tuberculosis. TB disease is usually found in the lungs, but may cause disease in any part of the body. TB disease is the leading cause of death in the world

### **How is TB disease spread?**

TB is spread through the air from one person to another. The bacteria get into the air when a person with TB disease of the lungs or throat coughs, sneezes, talks or sings. People nearby may breathe in these bacteria and become infected. TB is NOT spread by dishes, drinking glasses, clothing or touching a person with the disease.

### **What are the symptoms of TB?**

General symptoms may include fatigue, weight loss, fever, chills, and night sweats. Symptoms of TB of the lungs may include cough chest pain, and/or coughing up blood. Other symptoms depend would correspond with the affected part of the body.

### **Who gets TB?**

Anyone who has been around someone with TB and become infected are at increased risk of developing active TB disease. Once infected some people are at higher risk of developing active TB disease. Those at higher risk include: People who have close contact with someone who has active TB, homeless people, foreign-born people from countries where there is a high incidence of TB, people who live in congregate living (nursing home, jails, etc), alcoholics and IV drug users, HIV infected people, and people with certain medical conditions.

### **How long is a person with TB disease contagious?**

People with TB disease are considered noncontagious after they have 3 negative smear from sputum, been on treatment for at least 2 weeks, and are clinically improving. Person with active TB should be in TB isolation until the 3 measures have been met, either at home or in a hospital setting. If it is necessary for the patient to be out while still contagious the patient should wear a mask.

### **What is the treatment for TB?**

People with active TB are usually treated with Isoniazid, Rifampin, Pyrazinamide, and Ethambutol. Complete information can be found in the Core Curriculum on Tuberculosis, and the joint statement of the American Thoracic Society/Centers for Disease Control and Prevention/Infectious Disease Society of America: Treatment of Tuberculosis. These can be accessed through [www.cdc.gov/nchstp/tb/](http://www.cdc.gov/nchstp/tb/).

**Missouri Department of Health and Senior Services**  
**Section for Communicable Disease Prevention**  
**Phone: (866) 628-9891 or (573) 751-6113**

## COUNTY HEALTH UNIT

AGE

## Abstract

YES HOW I

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TBC-13 (6-02)



**TUBERCULOSIS WORKSHEET  
FOR CONTACTS OF NEWLY DIAGNOSED CASES OF TB**

NAME \_\_\_\_\_

NAME OF CONTACT IDENTIFIED	AGE	CLOSE CONTACT YES NO	MANTOUX TUBERCULIN TEST			X-RAY		STARTED PREVENTIVE TREATMENT			INFECTED WITH TB DISEASE?		HISTORY				SUPERVISION (PRIVATE PHYSICIAN, CHEST CLINIC, OTHER) AND REMARKS	
			DATE OF INITIAL TEST	IN. DURATION (MM)	DATE OF 3-MO FOLLOW UP TEST	IN. DURATION (MM)	DATE	NOR. MAL.	RESULT	YES	NO	DATE	NO	DATE	PREVIOUS SKIN TEST	PREVIOUS X-RAY		PREVIOUS PREVENTIVE TREATMENT
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